

AMENDMENTS TO THE CLAIMS

1-6. (Canceled).

7. (Currently Amended) A method of driving an electromagnetic pump, the method comprising:

conveying a fluid from a pump chamber formed inside a cylinder by housing a plunger including a permanent magnet inside the cylinder;

passing a current through an aircore electromagnetic coil fitted around the cylinder, and switching a direction of the current, to reciprocally move the plunger in the axial direction inside the cylinder; and

flowing a pulse current including a period where a voltage or current value is zero when a supplied current of the electromagnetic coil is inverted,

wherein a pulse minute current at least 30% of an inverted maximum current, whose current direction is opposite to that of the current passing through the electromagnetic coil immediately before flowing the pulse current, flows for a minute time period before the period where the current value is zero, when a polarity of the applied current of the electromagnetic coil is inverted.

8. (Canceled)

9. (Currently Amended) A method of driving an electromagnetic pump, the method comprising:

conveying a fluid from a pump chamber formed inside a cylinder by housing a plunger including a permanent magnet inside the cylinder;

passing a current through an aircore electromagnetic coil fitted around the cylinder, while switching a direction of the current, to reciprocally move the plunger in the axial direction inside the cylinder; and

firstly flowing an offset current of no greater than 30% of inverted maximum current, whose current direction is opposite to that of the current passing through the electromagnetic coil immediately before flowing the offset current, when a polarity of a supplied current of the electromagnetic coil is inverted.

10. (Currently Amended) The method of driving an electromagnetic pump according to Claim 9, wherein ~~before a period where the offset current flows, a~~ period where a minute current pulse at least 30% of the maximum current flows is set before a period when the offset current flows.